

CLAIMS

1. A method for sorting a plurality of items, to each of which a sequence number is assigned, into a predetermined sorted sequence using a plurality of sorting regions, including for each sort, at least one initial sorting region, and at least two additional
5 sorting regions, at least one of the additional sorting regions functioning as a return region, the items being initially located in the at least one initial sorting region, the method comprising the acts of:
 - sorting the items in each at least one initial sorting region into an intermediary sorted set by moving at least some of the items in the at least one initial sorting region
10 between the at least one initial sorting region and at least two of the additional sorting regions; and
 - sorting the items within each intermediary sorted set by moving at least some of the items to the return region in substantially the predetermined sorted sequence.
- 15 2. The method of claim 1, further comprising the act of using a computer to track the location of each of the plurality of items.
3. The method of claim 1, wherein the items are sorted in a single pass.
- 20 4. The method of claim 1, further comprising the act of conveying items from at least one of the return regions serially and in the predetermined sorted sequence.
5. The method of claim 1, further comprising the act of placing an identifier with each of the plurality of items.
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6. The method of claim 5, further comprising the act of checking the identifier to ensure that the order of the items substantially matches the predetermined sorted sequence.
7. The method of claim 1, wherein the items are positioned linearly in the sorting
30 regions.

8. The method of claim 1, wherein a computer is used to control the movement and positioning of the items according to a predetermined algorithm.
9. An apparatus for sorting a plurality of items comprising:
 - 5 a plurality of sorting regions;
 - a first mechanism for physically moving at least one item between at least two selected sorting regions;
 - a second mechanism for physically moving at least one item between positions within each sorting region;
 - 10 an item location tracking mechanism; and
 - a controls operative for controlling the first and second mechanisms to move the items into a predetermined sorted sequence at least partly in response to the tracking mechanism.
- 15 10. The apparatus of claim 9, wherein at least some of the sorting regions are located one under another and wherein the first mechanism includes an elevator.
11. The apparatus of claim 9, wherein the second mechanism is a conveyor.
- 20 12. The apparatus of claim 9, wherein the controls include a processor running a subroutine for issuing instructions according to a selected item sorting algorithm.
13. The apparatus of claim 9, wherein the items are postal bins.
- 25 14. The apparatus of claim 9, wherein the plurality of sorting regions comprise for each sorting at least one initial region in which items are initially located, at least one return region in which items are located after completion of sorting and at least one additional region used in the sorting.
- 30 15. An apparatus for using a plurality of sorting regions to sort a plurality of items comprising:
 - means for physically moving at least one item between at least two selected sorting regions;

- means for physically moving at least one item between positions within each sorting region;
- means for tracking the location of items; and
- means operative at least partly in response to the tracking mechanism for
- 5 controlling the first and second mechanisms to reposition items into a predetermined sorted sequence.